LAND FOR WILDLIFE NEWS

Newsletter of the LAND FOR WILDLIFE scheme

The Land for Wildlife sign is given to fully registered members to acknowledge the efforts being made towards nature conservation on private land. Photo: Stephen Platt

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Inside

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LAND FOR WILDLIFE VOLUNTARY WILDLIFE CONSERVATION

BOCA APPRECIATION EDUCATION CONSERVATION

Victoria The Place To Be

Land for Wildlife News
Vol. 5, No.1
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See page 16 for a list of where Land for Wildlife Extension Officers and Contacts can be found.

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Editorial

Dear Land for Wildlifers,

I hope your festive season was peaceful and happy. The start of a new year brings many challenges to us all. New Years Resolutions may include "this year I will control that blackberry patch", "this year I will start my revegetation project earlier" or "this year I will join the local Landcare group". What ever, the new year brings you, the Land for Wildlife team wishes you success with your nature conservation activities in 2002.

A reminder to members who are thinking of selling their property, advertising in the Land for Wildlife News is free. We will endeavour to help members find buyers who have similar environmental ethics to their own and who will continue on the good work. We would also appreciate a note, phone call or email letting us know that the property has sold. Please remember that once the property is sold, the Land for Wildlife sign needs to be returned to the Department of Natural Resources and Environment. The new owners will be encouraged to apply for registration.

After a newsletter mail out I get many envelopes "Return to Sender". Please let either myself or the local Land for Wildlife Extension Officer if you still own the Land for Wildlife property but have changed your postal address.

Last year, the inaugural Land for Wildlife Open Property Scheme was a great success. This year we hope to celebrate the program's 21st birthday with this year's Open Property Scheme. I am inviting all members who would like to be involved by opening their property to the public, to call their local Land for Wildlife Extension Officer. A database of potential properties is being kept so that closer to the time, a variety of properties can be selected. An invitation to attend will be sent to all members in the next newsletter.

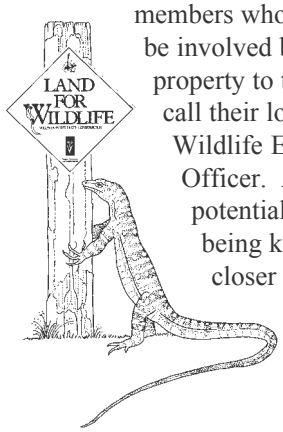

Illustration: Alexis Beckett

Recently, samples of the Land for Wildlife News have been put on the Land for Wildlife Web Page. Seeing the array of wonderful photos in full colour makes this visit worthwhile. See details above on how to visit the Land for Wildlife Web site.

Felicity Nicholls, Editor and Statewide Coordinator, Land for Wildlife.

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LFW MEMBERSHIP	PROPERTY AREA	RETAINED HABITAT	HABITAT UNDER RESTORATION	NEW PROPERTIES SINCE LAST EDITION
5,528	552,758 ha	126,890 ha	21,829 ha	135

Figures include reductions to areas due to de-registrations of properties. Current at 27th February 2002.

Letters to the Editor

Dear Editor,

I noted with interest the article in your last issue of LFW News about keeping cats permanently indoors. Unquestionably, cats have no acceptable place in the Australian bush. Moreover, if you need to keep a cat permanently confined indoors (for example, if your dwelling has no garden), then perhaps you should not own a cat. Nevertheless, where outdoor space is available, it is sometimes possible to find a compromise.

When we moved from suburban Greensborough to a bush setting adjacent to Kinglake National Park, the problem of how to manage my wife's beloved cat became an issue. Since we already successfully used an overhead wire as a run for our dog, we decided to try it with the cat also. We suspended a length of light nylon clothesline from a beam under the carport roof to a tree about 15m along the drive, and at a height of about 2m. We used the same string for the cat's leash, and attached it to her little collar. A light metal ring enabled the leash to slide along the run. We knotted a 15cm stick into the run about 3m from the tree end, so that the cat's lead could not tangle round the tree. We made sure the run was clear of other potential obstacles within the reach of the lead, but provided some boxes in the carport which the cat could climb up on (without hanging itself), and a cardboard box with bedding. A certain amount of care is needed to ensure that all possible risks to the cat are eliminated.

We were very surprised to find that our cat, despite being young and active, rapidly adjusted to its regular sessions on the leash. When we were out, we generally confined the cat indoors. But the cat spent several happy years using the run and, although it still managed to capture and kill one unlucky Jacky Lizard, the strategy no doubt prevented many potential wildlife mortalities, had the cat been free to roam. We were reminded of this potential when, one evening, we forgot to bring puss in before dark, and she captured a passing Sugar Glider (which we managed to rescue and release).

All-in-all, I think that, for cat-lovers who are prepared to give the design of an overhead run some careful thought, this can prove a useful option in appropriate situations.

Leigh Ahern, LFWer, Steels Creek

Dear Leigh,

Your idea is fantastic, I have also seen it work in a conservation area near Melbourne. As you pointed out, people must ensure obstacles are placed so that the cats (and dogs) cannot strangle themselves. Also consider the cat's safety where dogs and other cats may roam.

The Editor

Hollows - an essential resource for wildlife

What can you do?

Photo: F. Nicholls

Tree hollows are a valuable, and often essential, resource for many of Victoria's wildlife species. They offer refuge from the weather and predators and safe sites for breeding. Hollow bearing trees are a resource that takes a very long time to replace, if removed. Some hollows may take hundreds of years to form. Protecting hollow-bearing trees that remain is a vital step to ensure the survival of many species.

- **Retain mature hollow-bearing trees, whether alive or dead.**
- **Plant species native to your area that produce hollows.**
- **Discourage introduced species from using hollows.**

Feral Bees and Nest Boxes - a matter of grave concern

One of the problems associated with the use of nesting boxes for wildlife is the occupation by feral European Honey Bees (*Apis mellifera*). This aggressive introduction is regarded as threatening process in Australian ecosystems as the bees take nectar from native flowers, particularly the heaths, without pollinating them. Studies have shown that they are generally very poor pollinators of native plants, so apart from producing honey these animals do not have a positive impact on the Australian bush.

The occupation by feral bees of tree hollows and nesting boxes is a matter of grave concern. Once established the colonies can last many years. So how can we deal with this problem?

At the La Trobe University Wildlife Reserves, a Land for Wildlife property, we have been designing and building nest boxes for 30 years. In that time we have discovered a great deal about the most efficient designs for different species of native wildlife. We have also had to deal with feral honeybees in our boxes and tree hollows.

Here are some useful suggestions:

- Make sure that the total volume of a box is as low as possible, bees need about one cubic foot of space. Most native vertebrate species like tight spaces for security and temperature control.
- Boxes for gliding possums - half fill with fresh gum leaves to reduce volume – this won't worry the Sugar Gliders and may encourage usage.

Photo: Felicity Nicholls

What do you do if you have feral bees in your nest boxes or tree hollows?

- Opening the lid of a newly occupied box renders it unsuitable because the bees prefer the temperature of a hive to remain at a constant 33.9° C. Opening the lid makes this impossible to control. A few days after the swarm leaves, close the lid.
- If the bees are already established, totally block the entrance hole with a rag or other material – the bees will eat up the contents of the comb and starve. This can take a number of weeks to occur. Always use caution when doing this, ie wear protective garments and/or do it a night with a filtered light.

The use of residual surface insecticides is not encouraged as they may affect subsequent usage by other animals. Pest strips have been used effectively but there is a possible impact on wildlife and they do require ongoing maintenance.

The feral bee problem is not going to go away and so regular inspection of nest boxes and hollows during the period when the bees are swarming is vital to nip the problem in the bud. It might also be worth while getting in touch with local apiarists who may want to take a swarm off your hands or in this case, the nest box.

The Keelbundora Indigenous Nursery located at the La Trobe University Wildlife Reserves sells a range of nesting boxes to the public. Information on nest boxes can be obtained at www.latrobe.edu.au/wildlife or phone (03) 9479 2871

Dr. Adrian Daniell, Education Officer, Wildlife Reserves, La Trobe University

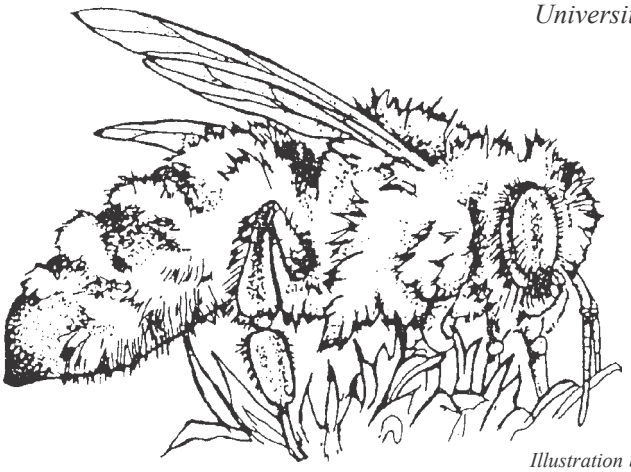


Illustration by Dawn Harris

For more information, refer to Land for Wildlife Note No. 14 "Nest Boxes for Wildlife". Contact your local Land for Wildlife Extension Officer or the Editor for a copy of "Nest Box Suppliers".

Bush Detective
Who made this?
Who did this?

Patt Tratt, a Land for Wildlife member from Metung sent in this photo of bark, stripped from the tree and lying in a heap at the base of the tree. The animal responsible for stripping the bark on this stringybark is most likely to be a Yellow-bellied Glider. The gliders strip the bark to get through to the cambium layer. This is where the phloem vessels are and the sap that the gliders are after. On smooth barked eucalypts the incision marks are quite clear (see News 4-8 page 5). On species such as Mountain Ash and stringybarks, the incisions may be hard to see because of the stringyness of the bark.

Did you know.....?

Millipedes are most easily distinguished from **centipedes** by having two pairs of legs on most body segments behind the head (versus one leg pair per segment in most centipedes), no trailing pair of legs behind the body (as in centipedes) and a harder (calcified) exoskeleton (centipedes are flexible if touched). Only centipedes can run fast and bite.

Reference: Millipede or Centipede? Nature Australia, Autumn 2001, Australian Museum, p 46.

Learning the lingo of Landscapes

Landscape ecology and landscape conservation have become important concepts in the attempt to reverse the increasing threat of habitat fragmentation. A number of terms have arisen in the field of landscape ecology and the following is an attempt to explain these.

Landscape level. This refers to an area from several to tens of kilometres across and usually involves a number of different properties and land managers. Boundaries may be determined by factors such as subcatchments, vegetation types or community group boundaries.

Connectivity relates to the capacity of a species to move through the landscape between suitable habitats.

Link, linkage. Terms referring to an arrangement of habitat (not necessarily linear or continuous) that enhances the movement of animals.

Linear habitat. A term referring to a linear strip of vegetation which is not necessarily indigenous and does not necessarily provide a connection between two ecological isolates.

Habitat corridor. A linear strip of vegetation that provides a continuous pathway between two habitats.

Stepping stones. One or more separate patches of habitat between ecological isolates, that provide resources and refuge that assist animals to move through the landscape.

References:
Bennett, A.F. (1999). Linkages in the Landscape. IUCN.
Bennett,A.F. et al (2000). Revegetation and Wildlife. Bushcare & Deakin University.

A mosaic of patterns across the landscape. Photo: Felicity Nicholls.

Property Profile

Lower Murray Water helping to entice important visitors from Siberia

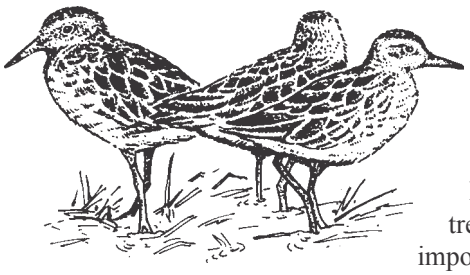


Illustration by Dawn Harris

Left: LMW employee Graeme Hobbs. Photo: Keith Thomson. Right: Freckled Ducks are one of the many threatened species found in the wetlands managed by LMW. Photo: Greg Chant.

I approached Lower Murray Water in September 2001 about the idea of registering some of their properties as Land for Wildlife. Many of their wastewater treatment plants contain important wetland habitats for a wide variety of native and migratory bird species. At certain times of the year, these wastewater treatment plants contain literally thousands of ducks and associated water bird species.

Lower Murray Water (LMW) supplies urban water and waste water services to townships along the Murray River in Victoria, from Kerang to Mildura. They supply water that has been pumped from the Murray River and then treated, to more than 48,000 people in 14 townships. Wastewater collection, treatment and effluent disposal services are provided in 9 townships.

LMW environmental policy states that the practice of water supply, wastewater services and development in its region, is environmentally responsible, ecologically sustainable and meets existing and emerging community standards and needs.

Bearing this in mind I approached LMW as I thought it an excellent opportunity to increase their knowledge and desire to protect and enhance wildlife habitat on the properties that they managed.

The Mildura Waste Water Treatment Plant for example, contains a billabong adjacent to the Murray River that supports a diverse array of aquatic wildlife including the threatened Freckled Duck. Other significant species found at the Mildura plant include Pink-eared Duck, Royal Spoonbill, Pacific Black Duck, Apostlebird, Rainbow Bee-eater and Great Egret.

The Swan Hill Wastewater Treatment Plant is another important site as during spring and summer it supports large populations of migratory species such as the Greenshank, Sharp-tailed Sandpiper and Curlew Sandpiper. Some of these birds migrate from Siberia, over 6000km away to the north, making the Swan Hill site an important feeding and resting site. Artificial impoundment's such as these now play an important role in providing habitat for such species.

The Koondrook Wastewater Treatment Plant is home to a nesting pair of Bush Stone-Curlews. This site has been fenced off to control stock access and the area that was once grazed is being enhanced through the establishment of native ground covers and shrubs. In the future, this revegetation program will hopefully provide further habitat for a wider variety of native fauna including Striated Pardalotes and Water Skinks.

The highly modified Fosters Swamp, to which the treated wastewater from the Kerang Waste Water Treatment Plant discharges, has been listed as a RAMSAR wetland. RAMSAR wetlands are sites based on international significance in terms of ecology, botany, zoology, limnology or hydrology.

Land for Wildlife status was given to Lower Murray Water for seven of their properties for their commitment to preserving and enhancing the natural ecosystems that occur upon the land they manage.

The company's commitment can be seen in their dedication to increasing their knowledge on how to effectively manage wildlife populations and with on-ground projects such as revegetation and fencing remnant vegetation.

Greg Chant, former Land for Wildlife Extension Officer, Swan Hill

How long do native grasses live?

On a recent visit to Geelong Botanical Gardens, Curator John Arnott showed me the new gardens being established at the entrance. The purpose of the visit was to make recommendations on planting part of the planned Gondwanaland garden, but what excited both of us more were the diverse native plants which have appeared since the work area was enclosed to keep the public out.

The new garden areas were originally a small part of Eastern Park, an extensive area of lawn planted regularly with exotic trees which surrounds the Gardens themselves. Eastern Park was first deliberately planted around the 1870s, with Blue Gums, the bulk of the introduced trees probably being planted some time later when the Gardens were started on.

The lawns have apparently never been specially treated or looked after, maintenance being mostly in the form of mowing. They are not as lush as the dense swards of introduced weeds that are maintained with excessive watering in many suburban gardens. On the other hand, they are comfortable to lie on, and make a perfectly acceptable, even conventional-looking lawn.

What is exciting about this lawn is that in the security fenced area being redeveloped, there has been no mowing recently so the lawn plants are able to flower. Under the introduced trees, many of the specimens with historic significance, dense stands of Kangaroo grass (Themeda) with numerous patches of Wallaby grasses (Danthonia) and more scattered Speargrass (Austrostipa) are about to set seed for the first time in probably close to a century! These stands have been harvested for rusty-coloured Kangaroo grass hay within living memory – it is cut around flowering time, long before the plant starts to form seed, as the hay becomes less nutritious as the seed matures.

Other indigenous plants present, such as *Convolvulus erubescens,* are generally regarded as more adaptable than native grasses, so it is less of a surprise to see these thriving as well, and a soon-to-be-named species of *Dianella* (presently known as D. sp. 'Buckley's Falls') has also been found in the park. It is particularly interesting that there are not many introduced grasses among the nearly pure stands of these diverse native species, though some are present in patches.

The enclosed area is only a small part of Eastern Park so it may not be representative, and there may also be other indigenous survivor's of Geelong's original native grasslands lurking elsewhere in the area. John Arnott plans to maintain the newly revealed native grasses as part of the expanded entranceway to Geelong Botanic Gardens. However, it would be excellent if other areas of native grasses and other remnant plants could be encouraged throughout Eastern Park. The City of Greater Geelong has a good environmental record overall, and will hopefully develop a plan for the continued maintenance of indigenous grassland species here.

The example of Eastern Park suggests that indigenous grasses can survive for a long time, but they won't live forever. Allowing a different patch of the park to reseed by leaving it unmown every year on a rotational basis (perhaps once in a decade), should allow long-term natural regeneration. Appropriate interpretative signs would not only explain the significance of the grasses themselves, but also their potential as a low-maintenance, drought-tolerant lawn.

This represents a possible opportunity to restore an indigenous grassland close to the centre of one of Australia's larger cities, with no more than a straightforward management plan and perhaps some spot control of introduced weeds where these appear to be successful. I would have said it is a unique opportunity, but who knows how many other remnant grasslands are hidden in our cities, unrecognised only because they are kept mown year after year?

Nick Romanowski, Dragonfly Aquatics, LFWer, Forrest

Illustration by Dawn Harris

Geelong Botanical Gardens showing kangaroo grass in the foreground and spear-grass and wallaby grass in the background. Photo: Nick Romanowski

Looking After Your "Tigers"

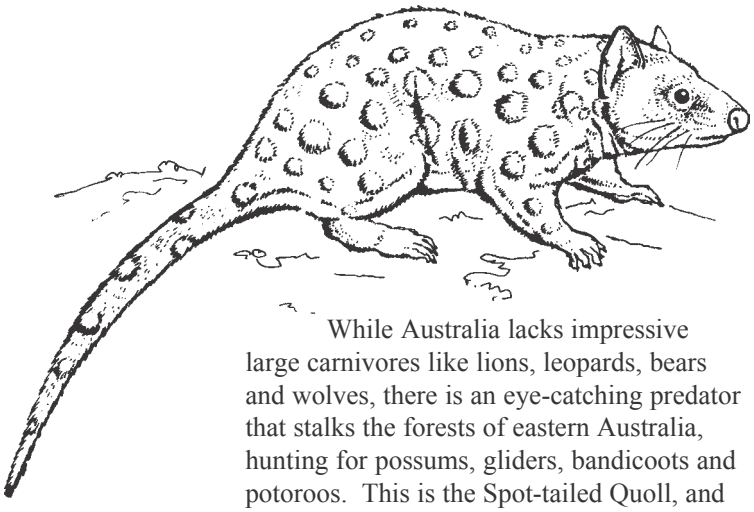


Illustration by Dawn Harris

While Australia lacks impressive large carnivores like lions, leopards, bears and wolves, there is an eye-catching predator that stalks the forests of eastern Australia, hunting for possums, gliders, bandicoots and potoroos. This is the Spot-tailed Quoll, and what it lacks in size it certainly makes up for in temperament! Also called the Tiger Quoll or Tiger Cat, this cat-sized marsupial carnivore is at the top of the food chain in forested areas, along with the dingo and the large forest owls.

Like most solitary carnivores, Spot-tailed Quolls have large home ranges, within which they hunt for prey. While these marsupial carnivores do not occur in high numbers, the potential still exists for Land for Wildlife properties that are either forested or which border forested land to be inhabited or visited by Spot-tailed Quolls. In order to make a property "quoll-friendly", there are a few simple actions that landowners can carry out to encourage quolls and to ensure any quolls living in the area are not put at risk.

Although it can be a time-consuming endeavour in terms of the essential bureaucratic processes that have to be undertaken, one of the most important activities landowners can carry out that is beneficial to quolls and other wildlife is *ongoing* fox control. Effective fox control provides an opportunity for the wildlife species that foxes prey on, such as possums, potoroos and bandicoots, to increase in number. The fox competes heavily with the quoll for prey. Eliminating foxes from an area, coupled with the increase in prey species, provides an ideal situation for quolls to recover and become re-established in an area.

The most effective way of controlling foxes is by placing poison baits in well-constructed and well-maintained bait stations and in cooperation with as many neighbouring properties as possible. Figure 1 illustrates how such a bait station should be constructed. There are two important objectives: you want to (a) kill foxes and (b) not kill quolls or other native species! There is a growing body of evidence which suggests that, unlike foxes, Spot-tailed Quolls are not particularly prepared to dig to extract baits. It is therefore important to construct bait stations within which baits are buried under 10-15 cm of soil. Foxes can easily locate and excavate baits at this depth without any hesitation.

As indicated in the diagram, soil should be dug out to a depth of 10 to 15 cm and preferably sieved back into the hole. The hole should be at least 50 cm in diameter. The purpose of this is to establish a bait station in which the bait can be buried under the required amount of soil to minimise the risk to quolls. Sieving the soil ensures that all the leaf litter, rocks, roots and other debris are removed, thereby making the on-going maintenance of the bait station easier. More soil from nearby may have to be added to form the low mound, as indicated in Figure 1. Alternatively, once the hole has been dug out, it can be filled with coarse river sand.

On your property, bait stations should be established along vehicle tracks or fence lines within specific guidelines, at intervals of between 500 and 1000 metres. Baiting at this intensity may mean that for a small property only a handful of bait stations are established. While "bigger is better" when it comes to fox control, what is more important is that baiting is carried out persistently, and for even a small property with a few bait stations on-going baiting programs will have a benefit for wildlife. It is best to establish bait stations in more open areas, if possible, where quolls, being animals that prefer cover, are less likely to encounter the bait stations.

It is important to note that it is a legal requirement for all landholders who wish to place poison baits on their property to have attended a Farm Chemical Users Course and have a current Agricultural Chemicals Users Permit (ACUP). Prior to baiting all neighbouring properties have to be informed, warning signs have to be erected and there several other conditions which have to be adhered to. Poison baits are only available from the Department of Natural Resources & Environment. Landholders should contact their local Catchment Management Officer to obtain baits and instructions for use. I recommend that landholders purchase the manufactured meat bait "Foxoff", which is easy to transport and use, requires no refrigeration, and, most

importantly, foxes find attractive, especially if a dash of tuna oil is added to the bait station before burying the bait. While landholders that wish to bait in an ongoing manner may find that the process they have to go through before each period of baiting is time-consuming, after a short period of time the procedure should become relatively routine and straightforward.

Baiting programs for wildlife conservation require a different approach to baiting programs designed to protect domestic stock from foxes. The principle aim of baiting programs designed to protect domestic stock is to create a "temporary predator vacuum", in other words to eradicate foxes in a given area for a relatively short period of time, mainly during lambing. The baiting methodology that is required to protect wildlife from foxes is different, because foxes pose a threat to native mammals all year-round. It is important, therefore, to ensure that baiting is carried out regularly, because once the resident foxes have been poisoned, young foxes will quickly become established in the vacant area and continue to prey on the resident wildlife. As part of our fox control research in East Gippsland, we have found that once resident foxes have been poisoned, replacing baits every three to four weeks is sufficient to ensure that fox numbers are kept in check. This level of baiting intensity may be difficult to maintain on a farm, but placing baits every six weeks or so may still ensure that fox numbers are kept in check.

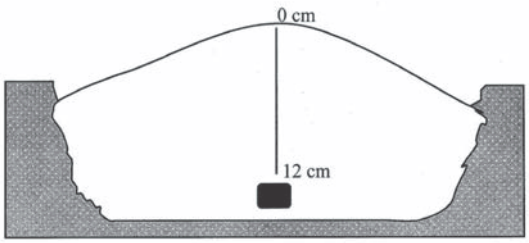
Reducing fox numbers will benefit all native wildlife, as long as those animals have somewhere to live! Ensuring that native forest on your property remains largely undisturbed is the best way to create a situation in which quolls might utilise your property. A well-developed understorey is important for both quolls and their prey, and the more structurally-complex your forest is, the more attractive it will be to quolls. Large hollow trees, stags and large fallen logs will be used as den sites by quolls as well as their prey (possums and gliders), and should be retained rather than being cut up for firewood! It is especially important to ensure that vegetation growing along gullies and waterways is undisturbed, especially if it is comprised primarily of native species, as it appears that quolls spend a lot of time hunting in gullies.

Quolls also seem to prefer to den up in complex rocky outcrops. What might appear to some people as a useless, boulder strewn rocky hill might be the ideal home for a quoll! These areas may also be home to other locally rare plants and animals, so they should be set aside…after all, what else can you do with them?

Keeping dogs, cats and poultry secure at night will also reduce conflict with any quolls living in your area. While Spot-tailed Quolls are not particularly afraid of dogs, the best way to avoid any contact is to keep them apart. The same goes for hens and ducks. Securing poultry each night in a quoll-proof henhouse is the best way to ensure that you don't provide a chicken dinner for a passing quoll.

While Spot-tailed Quolls are rare, they are still present in our forests and are an important component of our fauna. It will require our combined efforts to improve the conservation status of this species, and while it is critically important that our conservation efforts concentrate on large forested areas of public land, individual landholders that border these forests can assist in quoll conservation and management.

Figure 1. A "quoll-friendly" bait station design.



Andrew Murray is a Fauna Management Officer for NRE in Orbost. For the last five years he has been working on a project investigating the response of ground-dwelling mammals to fox control across large areas of forest in East Gippsland. Andrew also convenes the South East Forests Spot-tailed Quoll Working Group. Andrew can be contacted to discuss issues regarding quoll and, "quoll-friendly" fox control programs on 03 51 611 302 or email andrew.murray@nre.vic.gov.au.

A map showing historic and recent sightings of Spot-tailed Quolls in Victoria. Source: Atlas of Victorian Wildlife

Property Profile

Wyanga Winery – a haven for wildlife, tourists and the Mahlooks

Eighteen years ago Lyndel and Geoff Mahlook bought Wyanga Park Winery on 36 hectares near Lakes Entrance in East Gippsland. With five of their eight children in tow the Mahlooks have created a vibrant winery and restaurant business whilst allowing wildlife to thrive in the tall forest between the vineyards.

The property also boasts several threatened vegetation communities that provide habitat for migratory rainforest birds including Black-faced Monarchs, Rufous Fantails and Scarlet Honeyeaters. White-bellied Sea Eagles, various owls, Yellow-bellied Gliders, Sugar Gliders, wallabies, wombats, possums and reptiles also grace the property.

Geoff believes that as long as they patrol the vineyard fences for holes the possums, wallabies and birds that do get in don't take much fruit. In fact, it seems that the Mahlooks and visitors to the stunning property gain pleasure from the wildlife and this outweighs what they loose in grapes.

Visitors to Wyanga often arrive from Lakes Entrance by boat and the wildlife is always a feature. From the Wyanga jetty guests are driven up the steep hillside that Lyndel and the local Landcare group are revegetating to Warm Temperate Rainforest. Even during four years of drought 70% of the plantings using locally collected seed in the gully survived without watering.

During the last four years Lyndel has relentlessly fought Ragwort and Blackberry on the steep slopes and she's just starting on Bridal Creeper that is slowly making it's way up her gullies from the foreshore Reserve. "I get a great sense of satisfaction from weeding. It's a challenge to beat the weeds and I enjoy seeing them diminish over the years".

The Mahlooks are happy to have lost their water views to the increasing height of the trees including Gippsland Blue Gum and Coast Grey Box that surround their house. Lyndel loves cats but gives no thought to keeping one and threatening the native birds. Instead the Mahlooks are content to spend their days keeping weeds out of their remnants and watching Superb Lyrebirds scratch around for food as their newly planted rainforest gully begins to grow. Wyanga Winery is a great example of how a viable business and wildlife can coexist and thrive to provide a lifestyle that is the envy of many.

Emma Roe, Land for Wildlife Extension Officer, Bairnsdale

Top right. Rufous Fantail. Photo: Ian McCann/NRE. Bottom Right. Lyndel proudly hangs the Land for Wildlife sign at the entrance. Photo: Emma Roe. Below. Lyndel and Geoff successfully combine nature conservation with their business. Photo: Emma Roe.

What is your vision of our land?

There are 1479 rare or threatened vascular plants in Victoria and 237 rare or threatened vertebrate fauna in Victoria. Since European Settlement, some of our once dominant vegetation communities such as: wetlands, native grasslands and grassy woodlands have been dramatically degraded. One third (37%) of Victoria's wetlands have been lost, and 99.5% of our grasslands and grassy woodlands have been lost.

At a recent workshop, full of lots of so called 'Greenies', the guest speaker asked the question, 'So what if the last Spot-tailed Quoll (for instance) disappeared? 'Why should we care? An audience member answered with, 'because we are in an environmental crisis!' This really made me stop and think about how I would answer this question! Why should we protect our environment? Why isn't everyone doing it?

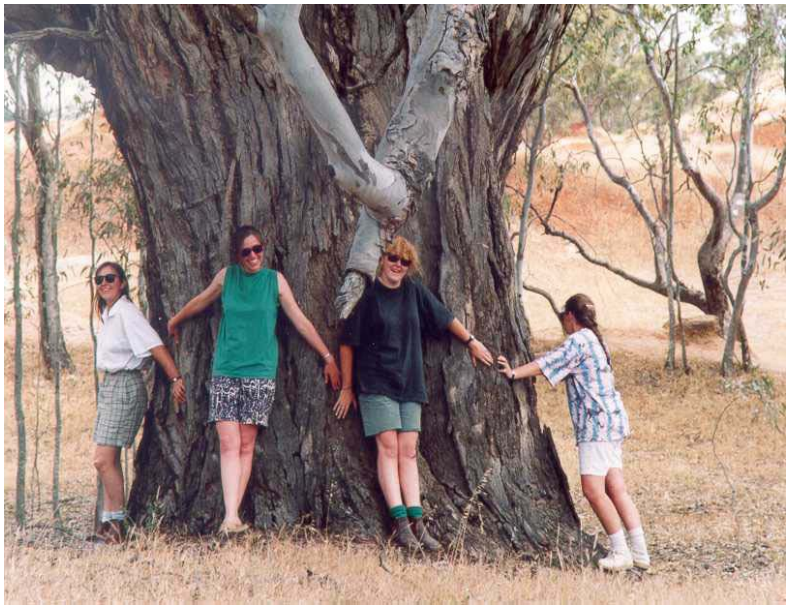
Try to imagine what sort of farm you would be proud to hand down to your children and children's grandchildren?

Remember those days when you had to walk down that bush track to the school bus? And you walked past that shallow wetland up the back paddock, first overwhelmed with the sound of various frogs calling then catching a glimpse of a flock of Brolga majestically dancing. What about crossing that creek and hearing the sound of water trickling over smooth pebbles in a crystal clear stream. The smell of the crisp, clean air in the early morning and passing the different scents of various colourful heaths, orchids and daisies. Did you see the Eastern barred Bandicoot scurry across in front of you? Or did you hear the eerie, high-pitched call of the Bush Stone Curlew? Sadly, not many of us have had the chance to experience something so special, so beautiful, and we may never get the chance!

I believe that it is important to remember why we are fencing off our wetlands and remnant bush. And why it is so important to plant local native species which our local wildlife depends on. Pass the message on, tell your neighbour and your uncle because we're in this together, and we can't protect your natural heritage without you!

Thank you for joining 'Land for Wildlife' and contributing to our children's, grandchildren's future by ensuring a beautiful piece of our natural environment (and our history) is cherished forever.

Tanya Wood – Land for Wildlife Extension Officer, Portland.



Let's hope our grandchildren are able to link arms around majestic old trees like this one. Photo: NRE

For further information on the 'benefits of wildlife habitat' and 'farm planning' refer to LFW notes 2, 4, 8, 9, 10 and 22.

References

Rare or Threatened Vascular Plants in Victoria – 2000, N.R.E East Melb Vic, 2000.

Threatened Vertebrate Fauna in Victoria – 2000, N.R.E East Melb Vic, 2000.

Grassy Guidelines: How to manage native grasslands and grassy woodlands on your property, Tim Barlow, 1998.

Victoria's Biodiversity, N.R.E, 1997.

A family enjoying the sights and sounds of the Australian bush. Photo: Felicity Nicholls

Economic Benefits of Biodiversity

What can business do?

In recent years, Australian business has strengthened its commitment to environmental compliance and reporting. A "beyond compliance" strategy represents a shift in philosophy from a reactive to a proactive approach to environment and biodiversity issues. A proactive approach can create opportunities for competitive advantage, increased productivity, enhanced corporate image, increased consumer acceptance of companies and their products and services, and improved profitability. There are a number of things that business can do:

- **Understand the impacts of your business on biodiversity.** You may need to carry out a survey of flora and fauna on land where you undertake your business activities. You may also need to establish the impact of your activities on ecosystem processes, for example, water flow over or onto adjacent land or land under your control. Consult with employees with local knowledge, indigenous people, academic institutions, local environment groups, government bodies and consultants.
- **Take account of the impact any new developments might have on biodiversity in the design and construction phases.** Design can accommodate existing biodiversity by limiting tree removal and ground disturbance. Landscaping should avoid monocultures (for example, large expanses of non-native grasses) to preserve and, where appropriate, increase biodiversity and limit water use.
- **Develop a biodiversity policy and action plan,** including ongoing auditing (monitoring) of impacts on biodiversity, including ecosystem processes.
- **Develop an environmental management system (EMS), which incorporates biodiversity impact assessment and management.** Next issue of the Land for Wildlife News will discuss this step in detail.
- **Inform employees about biodiversity and what it means.** Encourage their involvement in biodiversity programs and provide training.
- **Involve employees in environmental monitoring at your work site.** Work with non-government organisations to develop appropriate protocols.
- **Establish an employee fellowship program with a conservation organisation.** Research projects addressing biodiversity conservation and natural resource management provide an opportunity for company employees to learn first hand how ecosystems work and why biodiversity conservation is important. For the companies it is an investment in employee development and awareness as well as a commitment to biodiversity conservation.
- **Raise biodiversity awareness among contractors, suppliers and customers.** Establish what impact contractors and suppliers may have on biodiversity.
- **Write biodiversity requirements into performance contracts and reporting guidelines.**
- **Work with your industry sector to develop a code of practice encompassing biodiversity.**
- **Contribute constructively to the public policy debate on biodiversity.**
- **Join the Land for Wildlife Program.**
- **Enter into a voluntary conservation agreement.** The Commonwealth Government and some State Governments provide mechanisms for landholders to enter into a voluntary conservation agreement for the protection and conservation of biodiversity.
- **Support research into environmental issues or problems of relevance to management on, or adjacent to land under company control.** Postgraduate scholarships are an efficient method for supporting such research.
- **Fund and contribute to collaborative partnerships with environmental and community groups.** Provide financial or technical assistance to groups such as catchment committees, birdwatching groups or schools. Encourage employees to participate in a local revegetation program.
- **Make a donation to an environmental organisation.** The Commonwealth recently made income tax amendments to encourage philanthropic donations to environmental organisations.

Taken from:

Business and Biodiversity - an Australian business guide for understanding and managing biodiversity. Earthwatch Institute, 2001. For a copy contact Earthwatch on (03) 9682 6828.

Managing regrowth forests to improve wildlife habitat

How to 'manage' habitats for wildlife is one of the challenges that will face land managers on public and private land in coming decades. In the Box-Ironbark forests of north-central Victoria, the dense regrowth forests present in many areas are quite different from the descriptions of pre-European forests, apparently dominated by well-spaced, large old trees. Because the growth of trees in these dry environments is very slow, it will take many decades for 'old' forests to develop through natural processes. Consequently, it has been suggested that active 'ecological management' could be undertaken to speed up the rate at which an older forest structure develops.

A study at Deakin University, as part of a research partnership with Parks Victoria, was undertaken to document the differences in structure between current 'older' forest and younger regrowth forest as a first step in understanding the requirements for ecological management.

The main objectives were:

- to compare structural attributes of forest habitat in stands of older forest ('reference areas') with that in dense younger regrowth forests;
- to identify a set of habitat attributes that might be used as indicators of habitat quality for ecological management;
- to compare forest habitat in stands managed by silvicultural thinning with that in adjacent unthinned forest, to assess the extent to which present forest management might achieve ecological goals.

The comparisons showed that reference areas had a greater density of medium-sized, large and very large trees, more hollow-bearing trees, and greater diversity of size-classes of trees. In contrast, the regrowth forests had a higher density of smaller trees (<40 cm diameter). The spatial patchiness of small trees was significantly greater at the reference sites, while patchiness of larger trees was lower, indicating a more uniform distribution of large trees in older forest with patches of regenerating trees and open spaces. The reference areas also had a higher density and volume of logs, and greater patchiness of logs across the forest floor.

When thinned and unthinned forest stands were compared, there were a number of structural changes that suggest that the thinning process is shifting the forest structure in the required direction – that is, to be more like the old forest. For example, a lower density of smaller trees, lower patchiness of large trees and an increase in density and volume of logs. However, current silvicultural thinning is designed to increase tree growth and so it tends to promote even spacing of trees, rather than allowing a patchy structure. Patchiness appears to be a characteristic feature of older unmanaged forests.

What are the implications for management? First, it is clear that achieving an older forest is a process that takes many years. **Goals that will be realised only in the longer term as trees gradually grow and age include:**

- higher density of large and very large trees
- greater numbers of hollow-bearing trees
- the distribution of large trees throughout the forest.

However, this study suggests a number of actions which could be taken in the shorter term to improve habitat quality in regrowth forests.

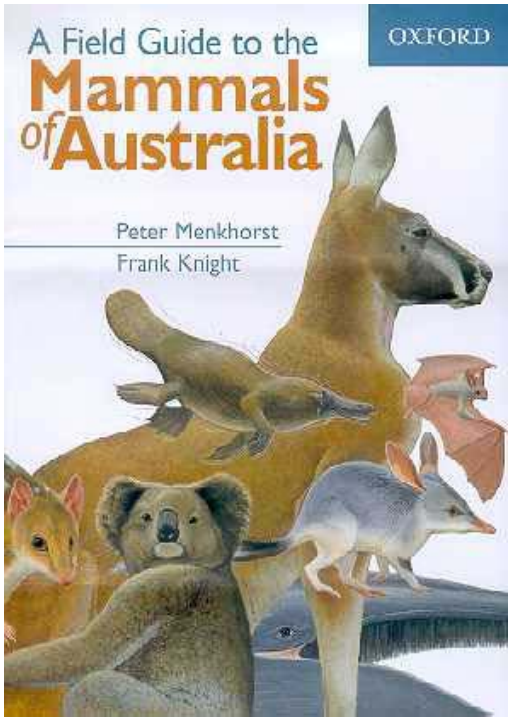
Shorter term goals include:

- increasing the patchiness of smaller trees, perhaps by thinning (by leaving some thicker patches of trees and patchy open areas);
- increasing the amount and patchiness of logs (by creating some piles of logs, as well as open spaces);
- increasing the number of hollow-bearing trees, such as by leaving dead trees to develop hollows.

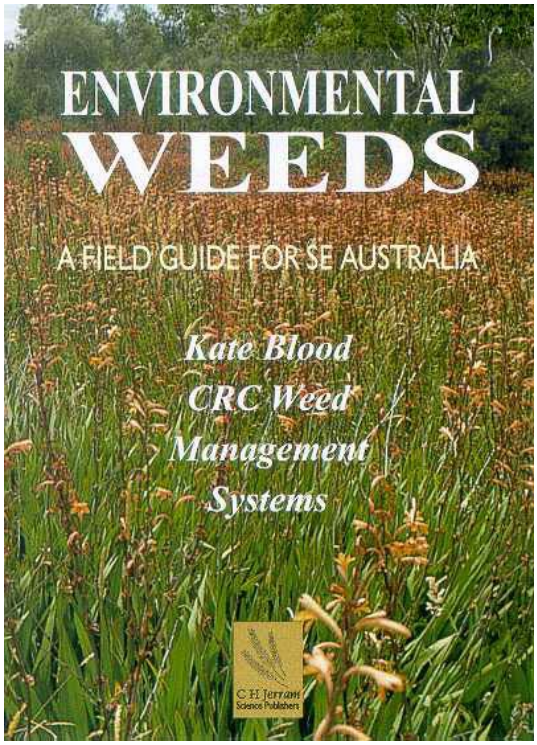
Reference:
Forest structure and ecological management in Victoria's Box-Ironbark forest (2001). Mark Venosta and Andrew Bennett, Deakin University - Parks Victoria Research Partnership. Yet to be published.

Creating habitat with a patchy structure has many ecological benefits. Photo: Felicity Nicholls

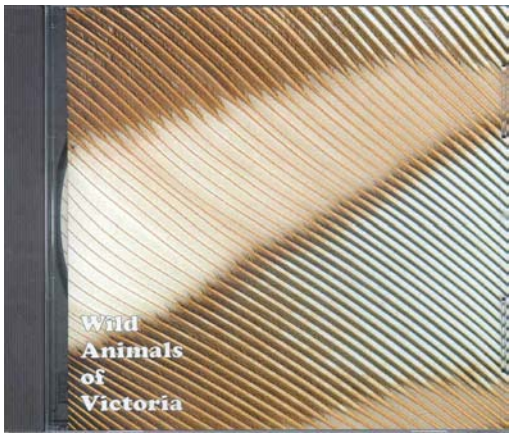
Recent Publications (see page 2 for member discount)



A Field Guide to the Mammals of Australia (2001). Peter Menkhorst and Frank Night. The first complete field guide to Australia's mammals, this new book offers a unique and comprehensive coverage of our diverse and fascinating mammal fauna. An essential companion for naturalists, biologists and students, it will also appeal to bushwalkers, environmentalists and tourists. Details of 159 species. Full colour illustrations, distribution maps and information on identification, voice, habitat and status, distribution, behaviour and similar species listed to help with identification. Sketches on skulls, tracks and traces also included with some species. Oxford Uni Press. $39.95. Available from the NRE Information Centre (see page 2 for more details).



Environmental Weeds - a Field Guide for SE Australia (2001). Kate Blood, CRC Weed Management Systems. This comprehensive field guide details over 175 environmental weeds in SE Australia including emerging and potential weed species. Detailed descriptions in easy to understand language, supported by excellent photography bring accurate weed identification within the reach of a broad range of users. Entries include weed shape and size, history and use, taxonomic relationships, origin, weedy distribution, description, reproductive and growth characteristics and confusing look-alikes. Distribution maps show current and potential range of weeds. CH Jerram Science Publishers. $35.00. Available from the NRE Information Centre (see page 2 for details).



Wild Animals of Victoria on CD-ROM. NRE and Viridans. This is a comprehensive and authoritative encyclopedia of Victoria's wild animals developed by Viridans using the extensive databases of the Department of Natural Resources and Environment. CD-ROM includes distribution information and concise descriptions, full-colour photographs, detailed local maps, searching facilities to find animal species recorded for any area on any map and various filters. $97.90. Contact Viridans on (03) 9596 8553. Also available at the NRE Information Centre (see page 2 for details).

Conservation Properties for Sale

Nungurner, 18.7ha, LFW and TFN covenanted property between Bairnsdale and Lakes Entrance, near the Gippsland Lakes. The property is in the Maringa Creek rainforest corridor, upstream from Nyerimilang rainforest revegetation area. Consists of broad undulating ridges with plains grassy forest (also a rare community) dissected by the steep gullies of the creek. Apart from 1ha of old garden in one corner, property is all natural or regenerating bushland with few weeds. Covenant allows 2ha for development. Shire planning permit current. No facilities but close to power, phones. Great opportunity to create your own world but still be close to major towns. $105,000. For more information, contact Peter or Barbara on (03) 5155 4863 or mitchell.moss@net-tech.com.au.

Chiltern, Conservation Jewel, 42 Acres (17.28ha), $85,000. This beautiful bush block is a member of Land for Wildlife and is fully protected under a Trust for Nature conservation covenant. With an old shack, dam, winter creek, and electricity this block is ready to build your dream nature retreat. Threatened Box Iron-bark forest, wildflowers and native grasses. Major flora and fauna species including Barking Owl, Swift Parrot, Squirrel Glider, Phascogale, Painted Honeyeater and the superb Turquoise Parrot. Only 30 minutes to Wodonga and about the same to Beechworth (Vic roads ref 35 D5). For further details call Colin Paine

Mobile: 0418 913 846 or email: cpaine@pindan.com.au

Gormandale, approximately 30 ha or 75 acres. $85,000. Beautiful bush block, flora and fauna in abundance including Manna Gums, peppermints, Blackwoods, Koalas, echidnas, kookaburras and much more - a real sanctuary! Yellow-tailed Black Cockatoos often roost in trees. Approximately 62 acres bush and 13 acres cleared (park-like). Excellent homesite, 20' x 30' shed and dam. 15 minutes to Traralgon, 2 minutes to Gormandale and 2 hours to Melbourne. Land for Wildlife property has a Trust for Nature conservation covenant. For enqiries phone Cheryl Perkins on 51575706.

Erratum

Land for Wildlife News 4_10 page 5. The photo of the Orange-bellied Parrot was taken by David Watts.

Please remember to return the Land for Wildlife sign if you have sold your property. Signs can be dropped off at your nearest NRE office or alternatively, you can contact the Land for Wildlife Extension Officer who may be able to arrange a pick up.

Photo:Stephen Platt

Have you sold or are you thinking of selling your Land for Wildlife property?

If you sell your Land for Wildlife property, please inform the Extension Officer or Statewide Coordinator. We can then alter the database and invite the new owners to join. **The Land for Wildlife sign is the property of NRE and needs to be returned or picked up.**

Advertising your property here is free to Land for Wildlife members.

Land for Wildlife **Extension Officers are at the following Department of Natural Resources and Environment Offices:**

Alexandra
- (03) 5735 1240
- (03) 5772 0257

Bairnsdale
- (03) 5152 0400

Ballarat
- (03) 5333 6928

Benalla
- (03) 5761 1525

Bendigo
- (03) 5430 4368

Central and West Gippsland
- (03) 5183 9103

Geelong and Melbourne West
- (03) 5226 4953

Melbourne East
- (03) 9785 0134

Portland
- (03) 5523 3232

Port Phillip East
- (03) 9785 0134

St Arnaud
- (03) 5495 1700

Wodonga
- (03) 6055 6173

Other *Land for Wildlife* contacts:

Colac
- (03) 5233 5533

Horsham
- (03) 5362 2111

Swan Hill
- (03) 5036 0832

Bird Observers Club of Australia
PO Box 185, Nunawading, 3131 (03) 9877 5342 or 1300 305 342 (country callers).

Courses/Field Days/Information Sessions

20th April 2002. Principles of Ecology. $60 or $10 for Cardinia Shire residents. Peppermint Ridge Farm, Tynong North, (03) 5942 8580.

28th April 2002. Bats, Frogs and Butterflies. $60 or $10 for Cardinia Shire residents. Peppermint Ridge Farm, Tynong North, (03) 5942 8580.

28th April 2002. From muddy dam to wildlife wetland. Victorian Landcare Centre, Creswick. NRE. (03) 5345 2200.

2nd May 2002. Linear Corridor Management. Greening Australia Vic. Location to be determined (Port Phillip area). John van Braam (03) 9450 5304.

19th May 2002. Bush Regeneration and Bushland Management. $60 or $10 for Cardinia Shire residents. Peppermint Ridge Farm, Tynong North, (03) 5942 8580.

25th May 2002. Koori Bush Medicine. $30 or $10 for Cardinia Shire residents. Peppermint Ridge Farm, Tynong North, (03) 5942 8580.

26th May 2002. Biodiversity Indicators - furry, flowery, flighty and ferocious. Victorian Landcare Centre, Creswick. NRE. Held at Forrest. (03) 5345 2200.

1st June 2002. Bushfood. $60. Peppermint Ridge Farm, Tynong North, (03) 5942 8580.

4th June 2002. Witchety Grubs and Wattle Seeds Bushfood Dinner. Greening Australia Vic. Location to be determined (Port Phillip area). John van Braam (03) 9450 5304.

6th June 2002. Identification of Wetland and Riparian Plant Communities. Greening Australia Vic. Location to be determined (Port Phillip area). Lydia Fehring (03) 9450 5302.

22nd June 2002. Farm Forestry/Plan for Trees. $60 or $10 for Cardinia Shire residents. Peppermint Ridge Farm, Tynong North, (03) 5942 8580.

23rd June 2002. Natural Resource Monitoring. $60 or $10 for Cardinia Shire residents. Peppermint Ridge Farm, Tynong North, (03) 5942 8580.

28th June - 2nd July 2002. Tea trees, tadpoles and terrains - Riparian Ecology Course (residential). $880. Greening Australia Vic. Contact Elaine Bayes (03) 9450 5305.

3rd July 2002. Respecting Reptiles. Greening Australia Vic. Possibly Healesville sanctuary. John van Braam (03) 9450 5304.

11th July 2002. Subdividing Land but not Biodiversity. Greening Australia Vic. Location to be determined (Port Phillip area). Lydia Fehring (03) 9450 5302.

21st July 2002. Fungi Features. Victorian Landcare Centre, Creswick. (03) 5345 2200.

6th August 2002. Remembering Roadsides - their management and re on. Greening Australia Vic. Location to be determined (Port Phillip area). Lyd... F...ring (03) 9450 5302.

9th August 2002. Looking after what we've got. Managing remnant vegetation. North Central CMA, Trust for Nature. Victorian Landcare Centre, Creswick. NRE. (03)5345 2200.

23rd August 2002. Mapping - what goes where. Vegetation mapping and analysis techniques. North Central CMA, Victorian Landcare Centr, NRE. (03) 5345 2200.